

# **EXHIBIT A**

Westlaw.

Not Reported in F.Supp.2d  
 Not Reported in F.Supp.2d, 2002 WL 31833867 (D.Del.)  
 (Cite as: 2002 WL 31833867 (D.Del.))

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Motions, Pleadings and Filings

Only the Westlaw citation is currently available.

United States District Court,  
 D. Delaware.  
 INTUITIVE SURGICAL, INC. and International  
 Business Machines Corporation,  
 Plaintiffs,  
 v.  
 COMPUTER MOTION, INC., Defendant.  
**No. Civ.A. 01-203-SLR.**

Dec. 10, 2002.

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 Wilmington, Delaware, Frank E. Scherkenbach, of  
 Fish & Richardson P.C., Boston Massachusetts. Susan  
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## OPINION

ROBINSON, Chief J.

## I. INTRODUCTION

\*1 On March 30, 2001, plaintiffs Intuitive Surgical,  
 Inc. ("Intuitive") and International Business Machines  
 Corporation ("IBM") filed this action against  
 defendant Computer Motion, Inc. ("Computer  
 Motion") alleging infringement of certain claims of  
United States Patent No. 6,201,984 (the "'984 patent").

(D.I.1) On May 17, 2001, defendant filed  
 counterclaims seeking a declaratory judgment of  
 noninfringement, invalidity and unenforceability.  
 (D.I.11)

Prior to trial, defendant stipulated to literal  
 infringement of certain claims of the '984 patent.  
 (D.I.293) From August 12, 2002 through August 21,  
 2002, the parties tried the issues of enablement, best  
 mode and damages to a jury, and the issue of  
 prosecution laches to the court.

On August 21, 2002, the jury returned a verdict that  
 the asserted claims are enabled, the inventors satisfied  
 the best mode requirement, and awarded damages of  
 approximately \$4.5 million. (D.I.309)

The court has jurisdiction over this matter pursuant to  
28 U.S.C. § § 1331, 1338(a), 2201 and 2202. The  
 following are the court's findings of fact and  
 conclusions of law pursuant to Fed.R.Civ.P. 52(a)  
 regarding the issue of prosecution laches.

## II. FINDINGS OF FACT

## A. The Parties

1. IBM is the assignee of the '984 patent, entitled  
 "System and Method for Augmentation of Endoscopic  
 Surgery." (PX 1)

2. Intuitive is engaged in the development,  
 manufacture, marketing and sale of robotic devices for  
 use in minimally invasive endoscopic surgery. (D.I.  
 311 at 145) Intuitive manufactures the da Vinci  
 Surgical System. (*Id.* at 147, 149) Intuitive licensed a  
 number of patents (including the '984 patent) from  
 IBM on December 22, 1997. (PX 413)

3. Computer Motion is engaged in the development,  
 manufacture, marketing and sale of robotic devices for  
 use in minimally invasive endoscopic surgery. (D.I.  
 313 at 655-83) Computer Motion manufactures the  
 AESOP, ZEUS Surgical System and HERMES  
 Control Center. (*Id.* at 679-80)

## B. Prosecution History of the '984 Patent

4. The '984 patent resulted from patent application  
 Serial No. 09/325, 761 (the "'761 application"), which  
 is a continuation of application No. 07/889,215 (the "

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'215 application") filed on May 27, 1992. (PX 1) The '984 patent is also a continuation-in-part of application No. 08/234,825 (the " '825 application") filed on April 28, 1994. (*Id.*)

5. In an Office Action dated September 27, 1993, the examiner found that the '215 application contained four distinct inventions, and required IBM to elect one group of claims and file three additional divisional applications on the remaining groups of claims. (D.I. 318 at 1581-82) IBM elected claims from group one, which issued on May 23, 1995 as United States Patent No. 5,417,210. (*Id.* at 1582-85)

6. On January 26, 1995, IBM filed three divisional applications for the remaining claims of the '215 application. (DX 1003, DX 1007, PX 1)

7. The divisional application that contained claims from group three issued as United States Patent No. 5,572,999 ("the '999 patent") on November 12, 1996. (D.I. 318 at 1591-94; DX 1003) The official filing receipt from the PTO was received by IBM for this application on March 16, 1995. (D.I. 318 at 1591- 94)

\*2 8. The divisional application that contained claims from group four issued as United States Patent No. 5,749,362 on May 12, 1998. (*Id.* at 1586-90; DX 1007) The official filing receipt from the PTO was received by IBM for this application on March 2, 1995. (D.I. 318 at 1586-90)

9. The divisional application that led to the '984 patent (the '761 application) contained claims from group 2 of the '215 application. (*Id.* at 1596)

10. It is undisputed that the '761 application file was misplaced by the PTO for several years. In an exhibit to the December 22, 1997 licensing agreement between IBM and Intuitive, the '761 application (designated as "0000000000") is noted as having a "filing receipt problem being resolved with the USPTO." (PX 413)

11. Louis Percello, the IBM attorney responsible for prosecuting the '984 patent, testified to multiple communications with the PTO attempting to resolve the status of the application. (D.I. 319 at 1778-84) At some point, Mr. Percello and the PTO determined that the PTO failed to create a file jacket for the '761 application. (D.I. 318 at 1598)

12. On May 14, 1999, IBM supplied the PTO with another copy of the '761 application and a copy of the postcard receipt as evidence of the original January 26,

1995 filing date. (*Id.*; CX 1 at 85) As a result, the official filing receipt from the PTO for the '761 application was not received by IBM until September 14, 1999. (D.I. 318 at 1598)

13. At the same time IBM re-submitted the '761 application, IBM added new claims. (CX 1 at 80-85) These claims cover the voice recognition aspects of the invention that were asserted in the instant litigation. The "voice recognition" claims were drafted by Intuitive and provided to IBM for filing with the PTO. (D.I. 319 at 1771-73)

14. On March 28, 2000, the examiner rejected all of the pending claims because of double patenting over claims 1-7 of the '999 patent. (D.I. 318 at 1607- 08, CX 1 at 149) The examiner stated:

The subject matter claimed in the instant application is fully disclosed in the ['999] patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a surgical instrument having a proximal and a distal end and extendable into a surgical site, a robot supporting the proximal end of the surgical instrument and moving the surgical instrument in response to motor signals, an input device comprising a voice recognition system for inputting instructions and a computer coupling the input device to the robot and generating the motor control signals controlling the robot. Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into [the '999] patent.

(*Id.*)

15. In response to the examiner's rejection, IBM filed a terminal disclaimer limiting the term of the '984 patent to that of the '999 patent. [FN1] (CX 1 at 166, 172-73)

FN1. IBM subsequently limited the term of the '984 patent to 17 years from the issue date of patent 5,279,309 (also owned by IBM), giving it an expiration date of January 17, 2011. (CX 1 at 2988)

\*3 16. The examiner further rejected certain claims for indefiniteness under 35 U.S.C. § 112 and anticipation under 35 U.S.C. § 102 based on United States Patent No. 5,402,801, which issued to IBM from parent application No. 07/714,816 (the " '816 application"), filed on June 13, 1991. (*Id.* at 150)

17. On May 17, 2000, IBM amended certain claims

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and converted the '761 application into a continuation-in-part of the '816 application, thereby claiming the filing date of the '816 application. (*Id.* at 166-67) A Notice of Allowability was mailed on August 8, 2000 and the '984 patent issued on March 13, 2001. (*Id.* at 176-77; PX 1)

### C. Computer Motion's Accused Products

18. Computer Motion began working on developing a robot for use in minimally invasive surgery in early 1992. (D.I. 318 at 1628) In September 1993, Computer Motion had developed the first surgical robot approved by the FDA, the AESOP 1000. (D.I. 313 at 675-77) The AESOP 1000 was operated with foot controls. (*Id.* at 675).

19. By December 1992, Computer Motion had completed a National Institutes of Health grant proposal to develop a robot with a voice control interface. (D.I. 318 at 1630-31; DX 1122)

20. In 1996, Computer Motion completed development of a voice controlled robot, AESOP 2000, which was used in a minimally invasive surgical trial. (D.I. 318 at 1632)

21. AESOP 3000 and AESOP 3000HR is the current version of Computer Motion's voice controlled robot which was introduced in 1997 or 1998. (*Id.* at 1649) Computer Motion generated approximately \$31 million in revenue from AESOP sales from 1993 through 2000. (*Id.* at 1658-59; PX 73)

22. Computer Motion has also developed the Zeus Surgical Control System and the Hermes Control Center which use voice control. (D.I. 318 at 1649-54) Development on these products began in 1995 and 1996, respectively. (*Id.*) Computer Motion generated approximately \$25 million in revenue from Zeus and Hermes sales from 1996 through 2000. (PX 73)

## III. CONCLUSIONS OF LAW

### A. Equitable Doctrine of Prosecution Laches

1. Computer Motion contends that the '984 patent is unenforceable against Computer Motion under the equitable doctrine of prosecution laches.

2. The Federal Circuit held in *Symbol Tech. v. Lemelson Medical*, 277 F.3d 1361 (Fed.Cir.2002), that the equitable doctrine of laches may be applied to bar enforcement of patent claims that issued after an unreasonable and unexplained delay in prosecution

even though the applicant complied with pertinent statutes and rules. Unfortunately, neither Congress nor the Federal Circuit has provided any further guidance on the legal standards applicable to the prosecution laches defense. Consequently, the court relies on two fundamental precepts as its analytical framework. First, a threshold inquiry must be undertaken as to whether a patent "was obtained after an unreasonable and unexplained delay in prosecution." *In re Bogese*, 303 F.3d 1362, 1367 (Fed.Cir.2002). The central focus of this inquiry is the reasonableness of the delay. See generally, *Webster Elec. Co. v. Spliendorf Elec. Co.*, 264 U.S. 463, 44 S.Ct. 342, 68 L.Ed. 792 (1924). Second, in reviewing the record to determine whether the delay at issue was unreasonable and unexplained, the court must consider the fact that prosecution laches is an equitable tool which has been used sparingly in only the most egregious of cases. [FN2]

FN2. The parties spend considerable time in their briefs debating the applicability of intervening rights, terminal disclaimers, prejudice, patent specification disclosures, the alleged infringer's knowledge and the differences in pre-1952 and post-1952 patent law to the doctrine of prosecution laches. Plaintiffs direct the court to the proposition that a patentee has the right to draft claims to cover competitors' products in the marketplace. See, e.g., *Kingsdown Medical Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 874 (Fed.Cir.1988) (internal citation omitted). Defendant relies on the proposition that "subject matter disclosed but not claimed in a patent application is dedicated to the public." *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1106 (Fed.Cir.1996) (internal quotations omitted). It is the court's view, however, that none of these tenets of patent law is relevant until the threshold inquiry is conducted and the court finds that the delay at issue was unreasonable and unexplained.

### B. Application of Prosecution Laches

#### 1. Total Delay

\*4 3. In the case at bar, the original parent patent application (the '761 application) was filed in May 1992. The '984 divisional patent issued in March 2001. Thus, the period between the original filing and the issuance of the '984 patent is almost nine years.

4. At least one other district court has held, post-*Symbol*, that a delay of more than nine years

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between the filing of a parent application and the issuance of a continuation or divisional patent is not unreasonable. *See Gen-Probe Inc. v. Vysis, Inc.*, No. 99-CV-2668H (S.D.Cal. Aug. 5, 2002) (post-trial order) ("[T]he Court finds that the eleven years between filing and issuance of the '338 patent is not unreasonable").

5. Although this court considers a nine year delay extended, the court must examine the prosecution history of the patent to determine if the delay is both unreasonable and unexplained. Three distinct periods of prosecution must be considered: 1) the time from the PTO's office action to the time of the original filing of the '761 application; 2) the time from the original filing of the '761 application to the time the application was re-submitted; and 3) the time from the re-submitted application to the time the '984 patent issued.

2. Period One: PTO Office Action to Original Filing of the '761 Application

6. The '215 application was filed in May 1992. In September 1993, the PTO concluded that the application contained four distinct inventions and required IBM to select one of the four for continued prosecution. In October 1993, IBM selected the first group of claims. IBM could have submitted divisional applications on the remaining three inventions at any time after September 1993. The '761 application was submitted as a divisional application in January 1995. Thus, IBM delayed for approximately one year and four months from the time it could have filed the '761 application.

7. The court finds that one year and four months is not an unreasonable delay in filing a divisional application in response to the PTO's office action.

3. Period Two: Original Filing of the '761 Application to Re-Filing of the Application

8. It is undisputed that the original '761 application filed in January 1995 was misplaced by the PTO. As a result, IBM re-submitted the application to the PTO in May 1999. This error resulted in a delay in prosecution of 4 years and 4 months. [FN3]

FN3. Defendant claims that the Supreme Court's decision in *Webster Elec. Co. v. Splittorf Elec. Co.*, 264 U.S. 463, 44 S.Ct. 342, 68 L.Ed. 792 (1924), establishes a "presumption of unreasonableness if the patentee delays more than two years." (D.I.

334 at 21) This court disagrees. The Federal Circuit, in discussing the Supreme Court's holding in *Crown Cork & Seal Co. v. Ferdinand Gutmann Co.*, 304 U.S. 159, 58 S.Ct. 842, 82 L.Ed. 1265 (1938), stated that *Crown Cork* "took aim at the bright-line rule established by *Webster* that a two-year delay is prima facie unreasonable and eliminated it." *Symbol Tech.*, 277 F.3d at 1365. Moreover, as with equitable laches, if a two-year presumption exists the presumption would act only as a production burden shifting mechanism. *See A.C. Auckerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1037 (1992) (en banc) ("The presumption compels the production of [a] minimum quantum of evidence from the party against whom it operates, nothing more.") (internal citation omitted). In the case at bar, IBM has met any burden of production it may have under the presumption.

9. This delay is at least partially due to the PTO's failure to create a file jacket for the '761 application. Any portion of the delay attributed to the mistake of the PTO must be considered an "explained" delay for purposes of the prosecution laches analysis.

10. The patentee, however, has some responsibility to ensure the continued progress of the prosecution of a patent application. In the case at bar, the patentee, IBM, is experienced in the procedures of the PTO. IBM filed three divisional applications on the same day. IBM received official filing receipts from the PTO for two of the applications in March 1995.

\*5 11. At some point, IBM realized that an official filing receipt was not received for the '761 application and contacted the PTO regarding the status of the application. The record does not disclose when IBM began communicating with the PTO regarding the official filing receipt problem. At the latest, IBM realized the official filing receipt problem by December 1997 as evidenced by the IBM--Intuitive licensing agreement. (PX 413)

12. The court finds four years and four months to be an unreasonable period of time for an experienced patentee such as IBM to identify and correct a misplaced application problem. This delay is especially troublesome if viewed from defendant's perspective. More specifically, the record arguably demonstrates that IBM was not motivated to pursue its patent rights until it entered into a license agreement with plaintiff, a direct competitor of defendant, at a

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time when defendant had already committed its resources to producing the AESOP 2000 (the first voice controlled surgical robot), ultimately enabling plaintiff to monopolize the market without contributing a product for the public's use and, indeed, enabling plaintiff to divest both defendant and the public of a valuable medical product.

13. As noted above, however, the delay must be both unreasonable and unexplained. Because some part of the four year and four month delay is explained by the PTO's mistake, the court is reluctant to hold the '984 patent unenforceable by reason of prosecution laches on the record presented. [FN4] To put the point differently, despite the court's discomfort with the business strategies apparently employed by plaintiff and IBM, without further guidance from the Federal Circuit, the court is not persuaded that the facts of record are sufficiently egregious to warrant application of prosecution laches.

FN4. The court notes that one of the many unsettled questions of law regarding prosecution laches is the burden of proof required to establish prosecution laches. One district court has held that "since the application of this doctrine would render a patent unenforceable, the moving party must provide clear and convincing evidence." *Gen-Probe Inc. v. Vysis, Inc.*, No. 99-CV-2668H (S.D.Cal. Aug. 5, 2002) (post-trial order) (citing *Li Second Family Ltd. Partnership v. Toshiba Corp.*, 231 F.3d 1373, 1378 (Fed.Cir.2000)). Defendant argues that, consistent with the burden of proof in equitable laches and estoppel cases, the preponderance of the evidence standard should apply. This court agrees. See *Auckerman*, 960 F.2d at 1044-45 ("The issue of laches concerns delay by one party and harm to another. Neither of these factors implicates the type of special considerations which typically trigger imposition of the clear and convincing standard."). The court finds, however, that defendant has failed to meet its burden under either a preponderance of the evidence or clear and convincing standard.

4. Period Three: Re-Filing of the '761 Application to Issuance of the '984 Patent

14. Once IBM re-submitted the '761 application in May 1999, the '984 patent issued one year and ten months later. The court has no difficulty finding that

one year and ten months is not an unreasonable time to prosecute a patent.

#### C. Defendant's Arguments

15. Defendant repeatedly argues that plaintiff delayed in submitting the claims at issue until the May 1999 amendment, although the claims could have been submitted as early as May 1992 with the parent '215 application.

16. The relevant inquiry, however, is not whether the patentee unreasonably delayed in filing specific claims in a patent application. Nor could it be. Patents are held in confidence by the PTO until the patent issues. [FN5] See 35 U.S.C. § 122(a). Thus, even if IBM submitted the claims at the time the '761 application was originally submitted, Computer Motion would not have been aware of the claims until the patent issued in March 2001.

FN5. Effective November 29, 2000, a patent application may be published after eighteen months under 35 U.S.C. § 122(b). At the time of the '761 application, however, publication was not available. In addition, even with publication a potential infringer may only rely on the specification for notice of what may be claimed as claims may be amended or added before issuance.

17. Although the cumulative delay in the prosecution of the '984 patent may very well have been fortuitous for IBM and Intuitive given the May 1999 amendment and this litigation, this is not a basis per se for rendering the patent unenforceable under the doctrine of prosecution laches.

#### IV. CONCLUSION

\*6 For the reasons stated, IBM did not obtain the '984 patent after an unreasonable and unexplained delay in prosecution. Thus, prosecution laches does not apply. An appropriate order shall issue and judgment shall be entered accordingly.

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• [1:01CV00203](#) (Docket) (Mar. 30, 2001)

END OF DOCUMENT

# EXHIBIT B

Westlaw.

--- F.3d ----

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(Cite as: --- F.3d ----)

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**H**Briefs and Other Related Documents

Only the Westlaw citation is currently available.

United States Court of Appeals, Federal Circuit.

SEMITOOL, INC., Plaintiff-Appellant,

v.

DYNAMIC MICRO SYSTEMS  
SEMICONDUCTOR EQUIPMENT GMBH,

Defendant-Appellee.

No. 05-1299.

April 6, 2006.

**Background:** Following reopening of patent infringement case, patentee, which held three patents pertaining to cleaning systems for semiconductor wafer carriers, sought to enforce previously entered permanent injunction and parties' settlement agreement, arguing that competitor's new carrier cleaning system literally infringed patents. The United States District Court for the Northern District of California, William H. Alsup, J., 2005 WL 350954, denied motion to enforce injunction and settlement agreement and granted competitor's cross-motion for summary judgment of non-infringement. Patentee appealed.

**Holdings:** The Court of Appeals, Prost, Circuit Judge, held that:

3(1) fact that accused device was closed system that external air did not enter or exit during operation did not establish non-infringement, and

9(2) accused device could not supply drying gas to processing chamber, as required to infringe asserted patent claims.

Affirmed.

**[1] Appeal and Error 30 893(1)**30 Appeal and Error30XVI Review30XVI(F) Trial De Novo30k892 Trial De Novo30k893 Cases Triable in Appellate Court30k893(1) k. In General. Most CitedCases

Under California law, interpretation of a contract is a question of law subject to de novo review on appeal.

**[2] Contracts 95 147(2)**95 Contracts95II Construction and Operation95II(A) General Rules of Construction95k147 Intention of Parties95k147(2) k. Language of Contract. MostCited Cases

Contract interpretation is governed by the objective intent of the parties, as embodied in the words of the contract, under California law.

**[3] Patents 291 235(2)**291 Patents291XII Infringement291XII(A) What Constitutes Infringement291k233 Patents for Machines or

## Manufactures

291k235 Identity of Principle or Mode of

## Operation

291k235(2) k. Particular Patents orDevices. Most Cited Cases

Under claim construction order entered in action alleging infringement of patents pertaining to cleaning systems for semiconductor wafer carriers, which focused on introduction of gas into process chamber and evacuation of drying gas from process chamber, fact that accused device was closed system into which external air did not enter and from which external air did not exit during operation did not establish non-infringement; whether gases entered or were evacuated from process chamber was different from whether air entered or exited machine during operation, and, depending upon how "process chamber" was defined, air could not exit machine yet still be introduced into process chamber and remove vapors from process chamber.

**[4] Patents 291 165(1)**291 Patents291IX Construction and Operation of Letters

## Patent

291IX(B) Limitation of Claims291k165 Operation and Effect of Claims in

## General

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291k165(1) k. In General. Most Cited Cases

Quite apart from the written description and the prosecution history, the patent claims themselves provide substantial guidance as to the meaning of particular claim terms.

#### **[5] Patents 291 165(2)**

291 Patents

291IX Construction and Operation of Letters Patent

291IX(B) Limitation of Claims

291k165 Operation and Effect of Claims in General

291k165(2) k. Claims as Measure of Patentee's Rights. Most Cited Cases

Court first looks to the words of patent claims themselves, both asserted and nonasserted, to define the scope of the patented invention.

#### **[6] Patents 291 101(3)**

291 Patents

291IV Applications and Proceedings Thereon

291k101 Claims

291k101(3) k. Limitations in General. Most Cited Cases

Pursuant to claim limitation in patent for cleaning apparatus for carriers used to hold and process semiconductor wafers and similar articles, which provided for apparatus containing "a processing vessel defining a process chamber therewithin," term "process chamber" was defined as the interior of the processing vessel, notwithstanding patentee's contention that process chamber was only that portion of processing vessel in which wafer carriers were loaded, cleaned, and dried.

#### **[7] Patents 291 101(4)**

291 Patents

291IV Applications and Proceedings Thereon

291k101 Claims

291k101(4) k. Specifications and Drawings, Construction With. Most Cited Cases

Specification in patent claiming method of cleaning and drying carriers for semiconductor wafers established that processing chamber was coextensive with processing vessel, and thus encompassed areas other than those in which wafer carriers were loaded, cleaned, and dried, given specification's description of baffle within processing chamber as "false bottom," its description of region below baffle as containing

processing chamber outflow opening or port, which suggested that area below baffle was part of processing chamber, and its treatment of terms "processing bowl," "processing chamber," and "processing vessel" as synonymous.

#### **[8] Patents 291 167(1)**

291 Patents

291IX Construction and Operation of Letters Patent

291IX(B) Limitation of Claims

291k167 Specifications, Drawings, and Models

291k167(1) k. In General. Most Cited Cases

Patent specification is always highly relevant to the claim construction analysis, and usually is dispositive; it is the single best guide to the meaning of a disputed claim term.

#### **[9] Patents 291 235(2)**

291 Patents

291XII Infringement

291XII(A) What Constitutes Infringement

291k233 Patents for Machines or Manufactures

291k235 Identity of Principle or Mode of Operation

291k235(2) k. Particular Patents or Devices. Most Cited Cases

Concession by patentee, which held patents pertaining to cleaning systems for semiconductor wafer carriers, that condenser in accused device was within device's processing vessel compelled conclusion that condenser was likewise inside processing chamber, which, under claim construction order, was properly defined to be coextensive with interior of processing vessel, and therefore condenser could not introduce drying gas to processing chamber or evacuate drying gas from processing chamber, as required to infringe asserted patent claims.

#### **Patents 291 328(2)**

291 Patents

291XIII Decisions on the Validity, Construction, and Infringement of Particular Patents

291k328 Patents Enumerated

291k328(2) k. Original Utility. Most Cited Cases

5,562,113, 5,738,128, 5,972,127. Not Infringed.

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(Cite as: --- F.3d ---)

Jerry A. Riedinger, Perkins Coie LLP, of Seattle, Washington, argued for plaintiff-appellant. With him on the brief was Michael D. Broaddus.

George T. Schooff, Harness, Dickey & Pierce, P.L.C., of Troy, Michigan, argued for defendant-appellee. Of counsel was Michael P. Doerr.

Before LINN, DYK, and PROST, Circuit Judges.

PROST, Circuit Judge.

\*1 Semitool, Inc. and Dynamic Micro Systems Semiconductor Equipment GmbH ("DMS") both manufacture and sell competing semiconductor wafer carrier cleaning systems. In 2001, Semitool sued DMS alleging that DMS's Model 300 and 310 cleaning devices infringed Semitool's patents. The parties entered into a settlement agreement that provided for a stipulated injunction with regard to DMS's Model 300 and 310 and to any colorable variants. Both the agreement and the injunction explicitly retained the district court's jurisdiction over the future enforcement of the agreement and the injunction. Subsequently, DMS produced a new device called the Tornado, which Semitool claims violates their settlement agreement and the injunction by literally infringing the patent claims. The district court denied the motion to enforce the permanent injunction and the settlement agreement and instead granted DMS's cross-motion for summary judgment of non-infringement. As the district court properly granted the cross-motion for summary judgment of non-infringement, we affirm.

## I.

On October 8, 1996, Semitool, Inc. was issued United States Patent No. 5,562,113 ("the '113 patent"). The '113 patent is entitled, "Centrifugal Wafer Carrier Cleaning Apparatus" and as the title suggests, the '113 patent describes a "cleaning apparatus for rinsing and drying carriers used to hold and process semiconductor wafers, substrates, flat panel displays and similar articles." '113 patent, col. 1, ll. 10-13. Semitool also filed continuation patent applications based on the '113 patent application. From these continuation applications, Semitool received two more patents: United States Patent No. 5,738,128 ("the '128 patent") which, like the '113 patent, claimed a centrifugal wafer carrier apparatus and United States Patent No. 5,972,127 ("the '127 patent"), which claimed a method of cleaning and drying wafer carriers.

As described in the '127 patent, the processing of semiconductor wafers and substrates

is very sensitive to problems of contamination.... [I]t is necessary to maintain a high level of cleanliness during all or nearly all stages of production.

Semiconductor wafers, substrates, photomasks, flat panel displays and other similar low-contamination wafer products are also typically processed in batches.... Batch processing of this type almost always utilizes some type of carrier or carriers to hold the thin wafer-like materials being processed.

'127 patent, col. 1, ll. 25-42. As a result, specialized cleaning machines are needed to maintain the cleanliness of the carriers. These machines both wash and dry the carriers. Centrifugal drying machines as described in the '113, '128 and '127 patents are one type of these specialized cleaning machines. They operate by spinning the carriers at high speeds whereby cleaning solvents are readily spun off the carriers and, furthermore, the induced airflow dries the carriers by removing any residual solvent.

\*2 DMS manufactured and sold carrier-cleaning machines. In prior litigation, Semitool sued DMS for patent infringement alleging that two DMS products, the Model 300 and the Model 310 wafer carrier cleaners, infringed the claims of the '113, '128, and '127 patents. During that proceeding, the district court construed the claims of the patents in a claim construction order. The district court granted Semitool's motion for summary judgment of infringement as to the Model 300 but denied the motion as to the Model 310. See *Semitool, Inc. v. Dynamic Micro Sys. Semiconductor Equip. GmbH*, No. C 01-01391, 2002 U.S. Dist. LEXIS 23050 (N.D.Cal. Sept. 5, 2002). Thereafter, the parties entered a settlement agreement.

In the settlement agreement, DMS agreed not to make, use, offer to sell, or import any infringing device. As part of the agreement, the parties stipulated to enter into a permanent injunction barring DMS from infringing any claims of Semitool's patents. Both the agreement and the injunction explicitly retained the district court's jurisdiction to enforce the agreement or the injunction. The agreement further specified that DMS's Model 300 and Model 310, as configured, admittedly infringed the patents and so would any device that is no more than a colorable variant of the Model 300 and Model 310. The settlement agreement also stated how to construe Semitool's patent claims in the event of any future infringement determinations: The Court's construction of phrases and terms used in the claims of the Semitool Patents, as specified in the Court's Final Claim Construction Order dated June 17, 2002, shall be used in determining whether DMS is

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infringing any claims of the Semitool Patents in violation of this Agreement or the Stipulated Permanent Injunction.

*See Semitool, Inc. v. Dynamic Micro Sys. Semiconductor Equip. GmbH*, No. C01-01391, 2005 WL 350954, \*3 (N.D.Cal. Feb. 14, 2005) (“*Semitool Order*”).

DMS has developed a new carrier cleaning system called the Tornado. On July 16, 2004, DMS filed an action seeking a declaratory judgment that its Tornado system did not infringe any of Semitool's patent claims. On September 21, 2004, the parties stipulated to dismiss the declaratory judgment complaint and instead the district court reopened the original patent infringement litigation. Semitool sought to enforce the injunction and to enforce the settlement agreement arguing that the Tornado system literally infringed its patents. DMS argued that the Tornado is colorably different from its previous models and does not infringe the patent claims, and therefore it does not violate the settlement agreement or the terms of the injunction.

The district court considered the differences between the Tornado system, the patent claims, and the previous infringing models sold by DMS and concluded that the Tornado was colorably different from the infringing models and did not infringe Semitool's patents. It granted DMS's cross-motion for summary judgment of non-infringement and therefore denied Semitool's motion to enforce the permanent injunction and settlement agreement. *Id.* 2005 WL 350954, \*----, slip op. at 9.

\*3 On March 15, 2005, Semitool appealed the district court's decision to this court. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

## II.

[1][2] “Summary judgment is appropriate when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law.” *Baxter Int'l, Inc. v. COBE Labs., Inc.*, 88 F.3d 1054, 1057 (Fed.Cir.1996) (citing Fed.R.Civ.P. 56(c); *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1576-77 (Fed.Cir.1989)). In their settlement agreement, the parties agreed that the terms of the agreement “shall be governed in all respects by the law of the State of California.” Under California law, “the interpretation of a contract is a question of law subject to de novo review” on appeal. *Int'l Rectifier Corp. v.*

*SGS-Thompson Microelectronics*, 38 USPQ2d 1083, 1101 (C.D.Cal.1994). Furthermore, contract interpretation is governed by the objective intent of the parties as embodied in the words of the contract. *Beck v. Am. Health Group Int'l, Inc.*, 211 Cal.App.3d 1555, 1562, 260 Cal.Rptr. 237 (1989). As stated above, the parties agreed that “the Court's Final Claim Construction Order dated June 17, 2002, shall be used in determining whether DMS is infringing any claims of the Semitool Patents.” Thus, in determining infringement, the district court and this court on appeal focus on the district court's Final Claim Construction Order.

### A.

In the present case, Semitool alleges that the Tornado system infringes claims 1, 4, 9, 17, 19, 39, 55, 56, and 57 of the '113 patent as well as claims 28-33 of the '127 patent. Of these asserted claims, claims 1 and 39 of the '113 patent and claim 28 of the '127 patent are independent claims. For purposes of the current dispute, there are two important claim limitations in each of these patent claims. Independent claim 1 of the '113 patent reads:

1. A centrifugal cleaner for cleaning carriers used in semiconductor processing, comprising:

...

a processing vessel defining a process chamber therewithin;

... [and]

at least one drying gas supply for supplying drying gas to the process chamber ....

Independent claim 39 of the '113 patent reads:39. A centrifugal cleaner for cleaning carriers used in semiconductor processing, comprising:

...

a processing vessel defining a process chamber therewithin;

... [and]

at least one primary drying gas supply for supplying primary drying gas to the process chamber ....

And independent claim 28 from the '127 patent reads:28. A process for cleaning carriers used to hold semiconductor articles, comprising:

...

a processing chamber within the processing vessel;

... [and]

supplying drying gas to the processing chamber.

Claim 28 of the '127 patent requires “a processing chamber within the processing vessel” and

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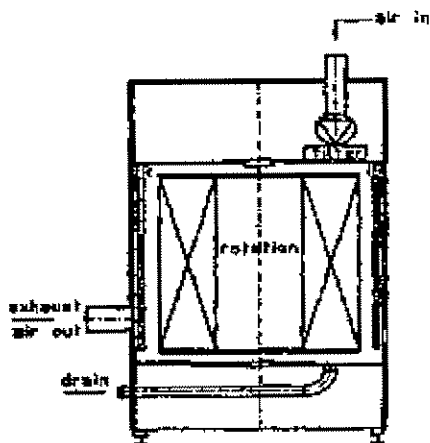
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furthermore “supplying drying gas to the processing chamber.” Almost identical limitations are found in the rest of the asserted claims. The current dispute centers on defining the processing vessel, the processing chamber, and supplying drying gas to the processing chamber.

\*4 The district court construed this last claim limitation in its Final Claim Construction Order and held that “drying gas” meant [a]n air or other gas with a low-contamination level that is capable of readily absorbing evaporated cleaning liquid from the carriers and removing said vapor(s) from the process chamber as the air or other gas is evacuated therefrom. Although it may be treated [i.e., treated by use of a heater], treatment is not a requirement so long as the “drying gas” is of low-contamination level and capable of readily absorbing evaporated cleaning liquid and removing said vapor(s) from the process chamber as the air or other gas is evacuated therefrom.

*Semitool Order*, 2005 WL 350954, at \*3. The phrase “supplying drying gas to the process chamber” was construed to mean the introduction of “drying gas” into the process chamber. Once inside the process chamber, all that is required is that the “drying gas” has a low-contamination level and is capable of readily absorbing evaporated cleaning liquid from the carriers and removing said vapor(s) from the process chamber as it is evacuated therefrom. Thus, the process chamber may include a device to enhance the

#### **DMS's Infringing Model 300**



In answering the first question, the district court discussed how the admittedly infringing Model 300 supplied drying gas to the processing chamber. In the Model 300 (shown above on left), drying air enters the

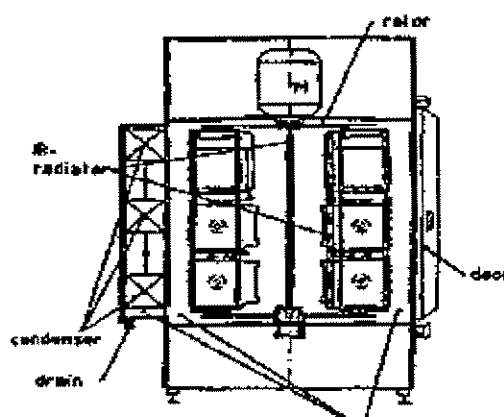
absorption/removal capabilities of the “drying gas” inside the chamber, i.e., a heater inside the process chamber.

*Id.*

Based on this claim construction, the district court then turned to the allegations of infringement. The district court noted that the parties disputed two things: “(1) whether the condenser [in the Tornado] supplies drying gas to the process chamber and (2) whether the condenser is part of the process chamber or a separate unit.” *Id.* at \*4.

As to the second question, the district court observed that Semitool “argues that ‘the condensing unit used in the Tornado system is outside the process chamber.’ Meanwhile [DMS] argues that the condenser is not a separate unit ....” *Id.* But ultimately, the district court concluded that “[i]n light of the ruling below, it is not necessary to reach this issue.” *Id.* In other words, the district court did not delve into the precise definition of the processing chamber, nor did the district court reach the question whether the condenser in the Tornado resides inside or outside the processing chamber. Instead it focused only on the first question and concluded that “[r]egardless of whether the condenser is merely an area within the process chamber or a separate unit, it does not ‘supply a drying gas to the process chamber.’” *Id.* at \*5.

#### **DMS's new M204 Tornado**



processing chamber and then is exhausted out of the apparatus in a similar fashion to that described in Semitool's patent. As shown on the right, DMS's Tornado does not have an external air inlet or external air outlet as did the Model 300. As described by the district court,

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\*5 Defendant's design-around product, the Tornado system, differs from the Model 300 in several respects; most importantly, the centrifugal fan that previously supplied clean room air *to* and the exhaust vent that allowed air to evacuate *from* the process chamber have been removed. Instead, as air circulates within the Tornado system, it passes a series of condensing plates located at the rear of the process chamber, behind a spray guard; this area of the device was called the "condenser" during depositions. These condensing plates are kept cool with a cooling liquid, such that the air becomes cooler as it passes, thereby causing moisture to precipitate onto the glass. This "cooler and drier" portion of air is re-circulated with the rest of the air. The mean humidity gradually decreases as the air in the process chamber absorbs more evaporated cleaning liquid from the carriers. This repeats until all or nearly all of the water vapor is removed from the process chamber.

*Id.* at \*5. The district court held that the Tornado system could not supply drying gas to the processing chamber as required by the claims, concluding that[r]ather, [the condenser in the Tornado] treats "drying gas" that was already within the process chamber, which is a closed system that merely re-circulates the gas therein. Thus, the Tornado system does not infringe the '113 patent or the '127 patent. Moreover, [the Tornado] is "more than colorably different" from the Model 300 and Model 310....

*Id.* at \*5. Accordingly, the district court granted DMS's motion for summary judgment of non-infringement and denied Semitool's motion to enforce the settlement agreement and the permanent injunction.

## B.

On appeal, Semitool argues the district court improperly granted the cross-motion for summary judgment of non-infringement by limiting the scope of Semitool's invention to cover only those systems that supply drying gas from an external source. Semitool argues that its patent claims do not require an external source of drying gas and that the Tornado system's condenser must only supply drying gas to the processing chamber as required by the claims. Semitool argues that the dried air flowing out of the condenser in the Tornado meets the District Court's constructions of both "drying gas" and "supplying drying gas to the processing chamber." The air absorbs and removes the solvents inside the Tornado system's processing chamber by carrying away vapor

as the drying gas is evacuated from the process chamber. Semitool argues that it does not matter that the air dried by the condenser originally came from the processing chamber. Nothing in the claims, specification or prosecution history of Semitool's patent requires an "open system" in which the drying gas is "new air" that originates from some location outside the cleaning system. With regard to the claim language, Semitool argues that the dried air is a drying gas that leaves the condenser and is supplied to the processing chamber. The Tornado system's condenser removes moisture from the air while the air is outside the processing chamber and introduces the dried air back into the processing chamber.

\*6 Semitool recognizes that its arguments are predicated upon locating the condenser outside the processing chamber—an issue the district court did not reach. If the condenser is located inside the processing chamber, then it cannot introduce drying gas into nor remove drying gases from the processing chamber. To support its contention that the condenser is not inside the processing chamber, Semitool argues that the processing chamber should be interpreted to extend only to the region where carriers are loaded, cleaned, and dried. Accordingly, with such an interpretation, the condenser in the Tornado would be located outside the processing chamber.

Semitool makes four related arguments to support its interpretation of processing chamber. First, it points to DMS's own admissions in the first infringement proceedings regarding the Model 300 device and its process chamber where DMS stated that "the central area of the DMS Model 300 contains a vessel defining a process chamber in which wafer carriers are loaded, cleaned, and dried." Second, Semitool points to DMS's own literature describing a "process chamber" in its Tornado with dimensions that seemingly cannot include the condenser. Third, Semitool points to DMS's own expert that testified that the usable interior space of the Tornado does not include the region containing the condenser thus inferring that the condenser is outside the process chamber. Lastly, Semitool points to the spray protection wall in the Tornado device that separates the condenser from the area where the carriers are cleaned. Semitool argues that this physical barrier proves that the condenser cannot be part of the process chamber.

On the other hand, DMS maintains that the condenser is necessarily inside the processing chamber and therefore the Tornado cannot infringe. DMS argues that Semitool's construction of "process chamber" proposed in its appeal brief—only the "usable area in

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the center of the system in which the wafer carriers are, loaded, cleaned and dried," is contrary to the patent specification. Rather, it submits that according to the specification the processing chamber encompasses the entire interior of the processing vessel and not just the central region of the vessel as contended by Semitool and that the '127 patent specification expressly contradicts Semitool's suggested interpretation of the term processing chamber. The specification states: The outer bottom wall piece 77 [of the processing vessel] has a processing chamber outflow opening or port [132] formed there-through adjacent to the outflow box [131]. Liquids drain across the bottom wall [77] of the processing bowl [21] and into the outflow box [131]. Gases flow from the processing chamber [47] through the outflow port [132] into the outflow box 131.

'127 patent, col. 7, ll. 20-27. From this language, DMS argues that the '127 patent specification expressly includes the area below the bottom baffle 85 and above the processing vessel's bottom wall 77 as part of the "processing chamber." Because that region is not the "usable area in the center of the system in which the wafer carriers are, loaded, cleaned and dried," DMS argues that this passage shows that Semitool's interpretation cannot be supported by the specification and that the correct conclusion is that the "processing chamber" is the entire enclosed area bounded by the processing vessel's walls. According to DMS, because the processing chamber encompasses the entire interior of the processing vessel, then the Tornado's condenser is squarely within the process chamber and therefore the Tornado cannot infringe the patent claims.

### III.

\*7 We ultimately conclude that it was proper to grant the motion for summary judgment of non-infringement albeit taking issue with some of the reasoning relied upon by the district court. Although the district court determined that it need not decide "whether the condenser is part of the process chamber or a separate unit," *Semitool Order*, at \*5, we find that summary judgment of non-infringement can only be properly granted if we determine that the condenser is inside the processing chamber.

The district court decided it did not have to reach that issue because "[r]egardless of whether the condenser is merely an area within the process chamber or a separate unit, it does not 'supply a drying gas to the process chamber.' " *Id.* "The Tornado system is a

closed system, meaning no external air enters or exits the machine during operation," and in the Tornado system "there is no *introduction* of 'drying gas' " into the process chamber. *Id.*

[3] As stated above, the Claim Construction Order construed "supplying drying gas to the process chamber" to require that "supplying gas is introduced into the process chamber" and furthermore "once inside the process chamber, all that is required is that the 'drying gas' ... is capable of readily absorbing evaporated cleaning liquid from the carriers and removing said vapor(s) from the process chamber as it is evacuated therefrom." *Id.* The Claim Construction Order focuses on introduction of gas *into the process chamber* and evacuation of drying gas *from the process chamber*. Whether gases enter or are evacuated from the processing chamber, as required by the claims, is quite different from whether "air enters or exits the machine during operation" as described by the district court in its infringement determination. For example, depending on how the processing chamber is defined, air may not exit the machine but nonetheless could be introduced into the processing chamber and could remove vapors from the processing chamber. Specifically, as argued by Semitool, if the condenser were located outside the processing chamber and yet still within the machine then the condenser could potentially introduce drying gases into the processing chamber and could remove vapors when drying gases are evacuated from the processing chamber despite the fact that the apparatus as a whole is a closed system. Because of this, we find it is necessary to reach the question that the district court did not reach: Is the condenser inside the processing chamber or is it outside the processing chamber?

While the Claim Construction Order does not explicitly construe the term "processing chamber," the term appears throughout the Claim Construction Order. As a result, in order to resolve this dispute, we must turn to the standard tools of claim construction to determine what the Claim Construction Order meant when it used the term "processing chamber."

In order to properly understand how the district court was using this term in its Claim Construction Order, it is necessary to define the relationship between the processing chamber and the major structural limitation in the patent: the processing vessel. Semitool argues that the processing chamber encompasses only the area inside the processing vessel where wafer carriers are loaded, cleaned, and dried. In other words, the processing chamber is only the central region of the

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processing vessel; the other outlying regions of the processing vessel are not part of the processing chamber. In contrast, DMS argues that the processing chamber encompasses the entire enclosed area bounded by the processing vessel's walls and that this interpretation is based on the specification from the '127 and '113 patents.

\*8 [4][5] In resolving this issue, we begin with the claims. "Quite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claim terms." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed.Cir.2005) (*en banc*). "First, we look to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996).

[6] Asserted independent claims 1 and 39 of the '113 patent have the limitation that the apparatus contain "a processing vessel defining a process chamber therewithin." In fact, as described above, Semitool supports its interpretation by pointing to DMS's own admissions wherein DMS stated that "the central area of the DMS Model 300 contains a vessel defining a process chamber in which wafer carriers are loaded, cleaned, and dried." Semitool argues that this supports their interpretation of process chamber. We do not agree. In fact, according to the explicit language of the claims themselves, the process chamber is defined as the interior of the processing vessel. For these claims, there is no doubt that the processing chamber encompasses the entire interior of the processing vessel and this conclusion is consistent with DMS's interpretation of processing chamber.

[7] Asserted claim 28, however, presents a more complex question. In contrast to the other asserted claims, independent claim 28 of the '127 patent does not itself contain the limitation of "a processing vessel defining a processing chamber therewithin." Rather, that claim only specifies "a processing chamber within the processing vessel." All that can be concluded from claim 28 itself is that the processing chamber must be within the processing vessel. In other words, according to claim 28, the processing chamber could constitute the entire interior of the process vessel or it could constitute some smaller space within the processing vessel. However, the clear definition of the process chamber language in the claims of the earlier '113 parent application suggests the same definition of the processing chamber in the continuation application which issued as the '127 patent. See, e.g., *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1293

(Fed.Cir.2005); *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed.Cir.2004).

[8] In any event, the specification makes clear that the processing chamber is coextensive with the processing vessel. As we stated in *Phillips*, "the specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.' " 415 F.3d at 1315 (quoting *Vitronics*, 90 F.3d at 1582).

DMS argues that the specification emphasizes that the processing chamber is meant to include the entire interior of the processing vessel. In other words, even regions of the processing vessel that are not areas where wafer carriers are loaded, cleaned, and dried are described by the patent as part of the processing chamber. In contrast, Semitool argues that the specification limits the process chamber because the specification describes a bottom baffle that separates the area where wafers are cleaned and dried from the rest of the processing vessel. Such a partition, according to Semitool, is quite relevant as the infringing device has a spray guard between the condenser and the area where the carriers are cleaned and dried.

\*9 The specification states that "[t]he processing chamber 47 is also most preferably provided with a false bottom or bottom baffle 85." '127 patent, col. 5, ll. 57-60. The specification describes the baffle as a "false bottom" rather than an actual bottom. As argued by DMS, this suggests that the area below the baffle is still part of the processing chamber. The specification also further describes this region below the bottom baffle by stating that "[t]he outer bottom wall piece 77 [of the processing vessel] has a processing chamber outflow opening or port formed there-through adjacent to the outflow box." '127 patent, col. 7, ll. 26-30. Because this opening is specifically labeled as the "processing chamber outflow" rather than the "processing vessel outflow," the specification further reinforces the conclusion that the area below the false bottom baffle is still part of the processing chamber. Therefore, contrary to Semitool's contentions, the specification supports an interpretation of processing chamber as the entire interior of the processing vessel.

Furthermore, the specification treats the three terms processing bowl, processing chamber, and processing vessel synonymously thus further reinforcing the fact that processing chamber should be interpreted to encompass the entire interior of the processing vessel. First, the specification describes the processing vessel synonymously with the "bowl." The specification

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introduces these two terms together by discussing “a processing bowl or vessel 21.” ’127 patent, col. 2, l. 66. Similarly, the specification describes a “sidewall of processing vessel or bowl 21.” ’127 patent, col. 3, l. 20. From these passages, the specification makes it clear that the processing vessel and the processing bowl are one and the same structural element.

But the specification also uses “bowl” in association with the processing chamber. The specification describes that “[t]he processing chamber bowl and other conduits which supply gas or liquids are preferably made of stainless steel.” ’127 patent, col. 11, l. 44. This passage indicates that the processing chamber is associated with the “processing bowl” and in every other portion of the specification the processing bowl is used synonymously with the processing vessel. The specification makes no meaningful distinction between the vessel, the bowl, or the chamber and therefore the specification further reinforces that the entire interior of the processing vessel and the processing chamber should be interpreted to be coextensive.

Thus, for claims 1, 4, 9, 17, 19, 39, 55, 56, and 57 of the ’113 patent, the claims themselves state that the “processing vessel defin[es] a process chamber therewithin.” Therefore, we agree with DMS that the processing chamber encompasses the entire interior of the processing vessel. Similarly, for claims 28-33 of the ’127 patent, although the claims themselves leave room for argument, the specification makes clear that the processing chamber is coextensive with the entire interior of the processing vessel. Having interpreted processing chamber to be coextensive with the processing vessel, we now turn to the question of the alleged infringement of the asserted claims by DMS’s Tornado wafer carrier cleaner.

#### IV.

\*10 [9] In order to infringe the asserted patent claims, the Tornado system must be “supplying drying gas to the process chamber.” The Claim Construction Order construed this limitation to require that the “supplying gas is introduced into the process chamber” and furthermore “once inside the processing chamber, all that is required is that the ‘drying gas’ ... is capable of readily absorbing evaporated cleaning liquid from the carriers and removing said vapor(s) from the process chamber as it is evacuated therefrom.” Thus, as described above, if the condenser is outside the processing chamber then the Tornado system may satisfy this claim limitation and it may infringe the

patent as the condenser could arguably supply drying gas into the processing chamber. In contrast, if the condenser is inside the processing chamber, then the condenser cannot introduce gas into the processing chamber and it cannot evacuate drying gas from the processing chamber and therefore the Tornado does not infringe.

As we concluded above, the Claim Construction Order should be interpreted such that the processing chamber is coextensive with the interior of the processing vessel. Thus, whether the condenser is inside the processing chamber is equivalent to whether the condenser is inside the processing vessel and this question was answered at oral arguments by Semitool. Although it first disputed the issue, Semitool ultimately explicitly acknowledged that, in the Tornado, the condenser is inside the processing vessel. Therefore we conclude that the condenser must also be inside the processing chamber. As a result, the Tornado cannot supply drying gas to the processing chamber as required by the claims as construed by the district court in its Final Claim Construction Order and therefore it does not infringe the asserted claims of ’113 or the ’127 patent.

#### V.

Because it resides inside the processing chamber, the condenser in the Tornado cannot supply a drying gas as construed by the Final Claim Construction order issued by the district court. DMS is entitled to judgment as a matter of law that it does not infringe Semitool’s patents and the district court properly denied Semitool’s motion to enforce the permanent injunction and the settlement agreement. We affirm the district court’s denial of Semitool’s motions and affirm its granting of DMS’s cross-motion for summary judgment of non-infringement.

No costs.

*AFFIRMED*

FN1. Claims 1 and 39 include a process chamber while claim 28 includes a processing chamber. We make no distinction between these two claim terms and we treat them as synonymous.

C.A.Fed.,2006.

Semitool, Inc. v. Dynamic Micro Systems Semiconductor Equipment GmbH

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- [2005 WL 3018517](#) (Appellate Brief) Reply Brief for Plaintiff-Appellant (Jul. 28, 2005) Original Image of this Document (PDF)
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- [05-1299](#) (Docket) (Mar. 24, 2005)

END OF DOCUMENT

# EXHIBIT C

Westlaw.

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Briefs and Other Related Documents

United States Court of Appeals,  
Federal Circuit.

ON DEMAND MACHINE CORPORATION,  
Plaintiff-Cross Appellant,

v.

INGRAM INDUSTRIES, INC. and Lightning Source,  
Inc., Defendants-Appellants,

and

Amazon.com, Inc., Defendant-Appellant.

Nos. 05-1074, 05-1075, 05-1100.

March 31, 2006.

**Background:** Owner of patent for system and method of manufacturing single book copy sued printer and retail book seller for infringement. The United States District Court for the Eastern District of Missouri, Mary Ann L. Medler, United States Magistrate Judge, entered judgment on jury verdict for owner, and seller appealed.

**Holding:** The Court of Appeals, Newman, Circuit Judge, held that patent was not infringed. Reversed.

**[1] Patents**  **314(5)**

291k314(5) Most Cited Cases

**[1] Patents**  **324.5**

291k324.5 Most Cited Cases

Patent claim construction is matter of law, and receives plenary review on appeal.

**[2] Patents**  **324.5**

291k324.5 Most Cited Cases

Jury instruction based on incorrect law, such as erroneous patent claim construction that may have affected verdict, receives de novo review.

**[3] Patents**  **323.3**

291k323.3 Most Cited Cases

**[3] Patents**  **324.55(1)**

291k324.55(1) Most Cited Cases

Erroneous jury instruction in patent case may warrant new trial, or appellate court may consider whether, on

correct instruction, jury could have reached only one verdict.

**[4] Patents**  **324.54**

291k324.54 Most Cited Cases

Patent infringement court's award of royalty-bearing license during appeal, and its refusal to issue immediate injunction, were reviewable for abuse of discretion.

**[5] Patents**  **161**

291k161 Most Cited Cases

Proper judicial construction of patent claim and its terms is from viewpoint of person of ordinary skill in the field of invention; court must determine how such person would understand claim in context of particular technology and description in specification, with due reference to prosecution history.

**[6] Patents**  **165(2)**

291k165(2) Most Cited Cases

Generally, scope and outer boundary of patent claim is set by patentee's description of his or her invention.

**[7] Patents**  **101(2)**

291k101(2) Most Cited Cases

"Sales information" provided to customer, in patent for system and method of manufacturing single book copy, had to include promotional information, in addition to price and identifying information; patentee had stressed inclusion of promotional information in order to overcome examiner's prior art objection.

**[8] Patents**  **101(2)**

291k101(2) Most Cited Cases

"Customer," referred to in patent for system and method of manufacturing single book copy, was limited to retail, book-buying customer.

**[9] Patents**  **165(2)**

291k165(2) Most Cited Cases

When scope of invention is clearly stated in patent specification and is described as advantage and distinction of invention, claim will be construed as limited to such scope even if different scope is not explicitly disavowed.

**[10] Patents**  **167(1.1)**

291k167(1.1) Most Cited Cases

Patent claims cannot be of broader scope than

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invention that is set forth in specification.

**[11] Patents**  **101(2)**291k101(2) Most Cited Cases

Patent for system and method of manufacturing single book copy, calling for provision of computer means to customers for visual reviewing of sales information, required provision of computer system that allowed retail customer to initiate printing and binding of selected book from data that had been entered into computer. 35 U.S.C.A. § 112(6).

**[12] Patents**  **101(3)**291k101(3) Most Cited Cases

Patent for system and method of manufacturing single book copy, calling for "printing on paper pages," required that paper be in form of pages at time of printing, rather than being cut into pages after printing.

**[13] Patents**  **165(4)**291k165(4) Most Cited Cases

Preamble phrase "high speed manufacture of single copy of book," in patent for system and method of manufacturing single book copy, was claim limitation; preamble stated framework of invention, and thus limited claim to its subject matter.

**[14] Patents**  **165(4)**291k165(4) Most Cited Cases

In considering whether preamble limits patent claim, preamble is analyzed to ascertain whether it states necessary and defining aspect of invention, or is simply introduction to general field of claim.

**[15] Patents**  **167(1.1)**291k167(1.1) Most Cited Cases

Each patent claim term must be construed to implement invention described in specification; care must be taken lest word-by-word definition, removed from context of invention, leads to overall result that departs significantly from patented invention.

**[16] Patents**  **235(2)**291k235(2) Most Cited Cases

Patent for system and method of manufacturing single book copy, calling for point-of-purchase book manufacturing in response to selection made by customer after he or she has reviewed stored sales information, was not infringed by small-batch printer who supplied retail book seller with single copies of books ordered by seller's customers.

**Patents**  **328(2)**291k328(2) Most Cited Cases

5,465,213. Not Infringed.

William Bush Cunningham, Jr., Polster, Lieder, Woodruff & Lucchesi, L.C., of St. Louis, Missouri, argued for plaintiff-cross appellant. With him on the brief was McPherson D. Moore. Of counsel on the brief was David B.B. Helfrey, Helfrey, Simon & Jones, P.C., of Clayton, Missouri.

William K. West, Jr., Howrey Simon Arnold & White, LLP, of Washington, DC, argued for defendants-appellants. With him on the brief were David W. Long, Pamela S. Kane and Jim W. Ko. Of counsel on the brief were Keith A. Rabenberg and Jennifer E. Hoekel, Senniger Powers, of St. Louis, Missouri.

Before NEWMAN, MAYER, and BRYSON, Circuit Judges.

NEWMAN, Circuit Judge.

\*1 Ingram Industries, Inc., Lightning Source, Inc., and Amazon.com, Inc. (collectively the defendants) appeal the judgment of the United States District Court for the Eastern District of Missouri, [FN1] holding them liable for infringement of United States Patent No. 5,465,213 (the Ross patent) owned by On Demand Machine Corporation (ODMC). We conclude that the jury verdict of infringement was based on a partly incorrect claim construction, and that on the correct construction a reasonable jury could not find the patent to be infringed. Accordingly, the judgment of infringement is reversed and the damages award vacated. The grant of a royalty-bearing license during appeal is vacated, and the issues raised by cross-appeal are moot.

#### BACKGROUND

The Ross patent is for a "System and Method of Manufacturing a Single Book Copy," wherein a single copy of a book is printed and bound, generally at the site of sale, upon provision to the customer of computerized information about the book. According to the Ross patent, a retail seller of books provides a computer console for customer use, wherein the computer stores promotional and other information such as book reviews and price, and also stores the complete text of the book and the design of its cover. The customer can browse through the stored information, inspect the text, and select a book for purchase; the book is then printed and bound, preferably at the same site. The patent's Summary of the Invention describes the system as follows:

A customer module (e.g. a customer kiosk) permits the consumer to access the promotional sales

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information on a display screen which may include general information such as a list of best sellers or specific information (e.g. a sample chapter) about individual books in which the consumer may have some interest. Such promotional sales information may include a graphical simulation of the book, descriptive information provided by the publisher, as well as a synopsis and critique of the book by a book reviewer presented in full motion video and stereo sound. The consumer may browse through the introduction, abstracts or selected pages of the book on the computer module screen.

...

It is therefore an object of the invention to provide a book manufacturing system which is capable of storing data corresponding to the text and color

graphical cover of tens of thousands of different books, as well as promotional sales text and color graphics for aiding the consumer in choosing a book for purchase, and facilitate the high speed manufacture of a single copy of a selected book on the immediate premises while the customer waits for a very short time.

Col. 1, line 63--col. 2, line 8; col. 3, lines 7-14. The patent explains the advantages of providing promotional information to the customer, along with immediate production and delivery of the selected book. Patent Figure 2 shows a sales kiosk with the customer at the computer, and adjacent printing/binding equipment:

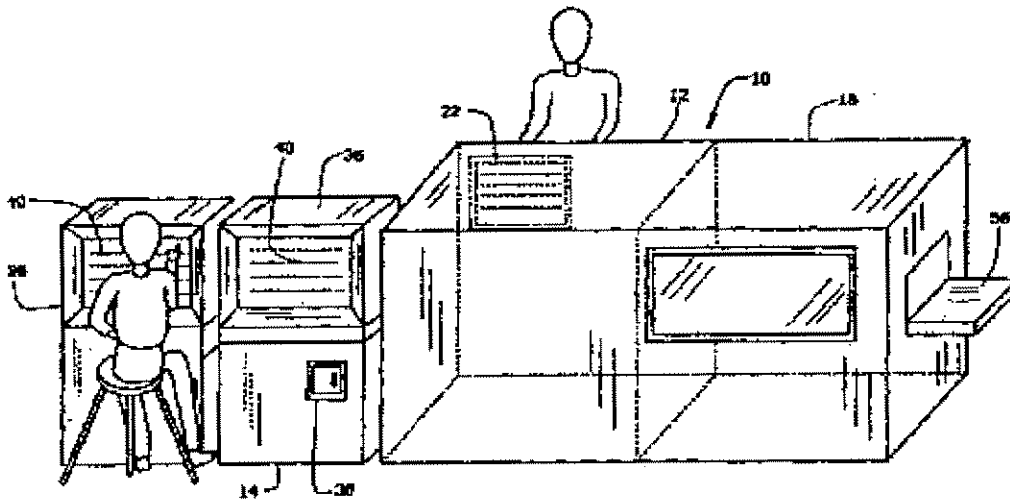


FIG. 2

\*2 Defendant Lightning Source is a book printing company with a factory in LaVergne, Tennessee, and defendant Ingram Industries is the corporate parent of Lightning Source. Lightning Source prints and sells books as ordered by publishers, wholesalers, and retailers such as Amazon.com, but does not sell directly to the public. Purchasers may order books from Lightning Source through its website or by electronic data interchange (EDI), identifying the book by its title and author or ISBN (International Standard Book Number). Lightning Source usually prints books in batches, often as large as several hundred books, but may also print single copies if ordered. Lightning Source testified that the turn-around time from order until delivery ranges from one to fifteen days. Defendant Amazon.com is a seller of books and other products to the public on the internet: its internet website provides promotional and sales information on individual books, and receives orders from customers. Amazon.com does not print

books, but may order single or multiple copies from Lightning Source to fill orders from the public.

While the Ross patent application was pending, Mr. Ross offered to license his invention to Ingram Industries, a commercial printer. They entered into a one-year confidentiality agreement beginning in February 1995, and Mr. Ross disclosed his patent application and business plans to Ingram. The Ross patent issued on November 7, 1995. Ingram sought the advice of counsel, who advised that Ingram could practice on-demand printing in a non-infringing manner. In September 1996 Ingram informed Mr. Ross that Ingram was not interested in obtaining a license. Ingram then created a subsidiary company, Lightning Source, to print books to order for resellers but not for the general public.

In 1997 ODMC requested reexamination of the Ross patent, citing several additional references. Claims 7

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and 8 were duly confirmed by the Patent and Trademark Office, and are as follows (with bracketed numbers as added by the district court):

7. A method of high speed manufacture of a single copy of a book comprising the steps of:

[2] storing the text of a plurality of books in a computer,

[3] storing a plurality of covers for books to be printed in said computer, said covers being stored in a bit mapped format,

[4] storing sales information relating to said plurality of books in a computer,

[5] providing means for a customer to scan said sales information,

[6] enabling the customer to select which book or a portion of a plurality of books,

[7] commanding a computer to print the text of said selected books and a cover in response to said selection,

[8] retrieving the text of said selected books from a computer,

[9] printing the text of said selected books on paper pages, and

[10] binding said paper pages together to form said selected one of said books.

Claim 8 is similar, but varies in the clauses relating to the book cover:

8. A method of high speed manufacture of a single copy of a book comprising the steps of:

[2] storing the text of a plurality of books in a computer,

[3] storing sales information relating to said plurality of books in a computer,

[4] providing means for a customer to visually review said sales information,

[5] commanding a computer to print the text of a selected one of said books in response to a customer's selection,

[6] retrieving the text of said selected one of said books from a computer,

[7] printing the text of said selected one of said books on paper pages,

[8] binding said paper pages together to form said selected one of said books,

[9] storing graphical information corresponding to the cover of each of said books,

[10] commanding a computer to reproduce said graphical information on a book cover, and

[11] binding said paper pages together with said cover therearound.

\*3 After the reexamination Mr. Ross informed Ingram that Lightning Source was infringing the Ross patent and again offered a license. Ingram and Lightning Source again sought the opinion of counsel, who advised that "the printing of books in accordance

with the flow diagram of Exhibit A by Ingram, would not constitute infringement of the claims of the Ross patent." (Opinion Letter of Sept. 20, 1996). Counsel also advised that infringement would not be found if the claims were limited to the embodiment shown in the specification, but cautioned that if a trier of fact were to look at the claim language in isolation from the specification and the embodiment described therein, infringement might be found, although such broad claims would be of questionable validity in view of the prior art. Opinion letter of November 19, 1998 ("To be at risk, the claims would have to be interpreted very broadly and a broad interpretation of the claims could well invalidate them.") Lightning Source sought the opinion of other counsel, who were of similar view. Ingram and Lightning Source then declined the proffered license.

ODMC filed suit against Ingram Industries, Lightning Source, and Amazon.com, alleging infringement of claims 7 and 8 and that the infringement was willful. The district court held a *Markman* hearing and construed various claim terms, and instructed the jury accordingly. The jury returned a verdict of infringement, and awarded \$15,000,000 in compensatory damages. The jury also found the infringement to be willful, but the court denied ODMC's request for enhanced damages and attorney fees, explaining that this was "an extremely close case." On this appeal the defendants challenge the district court's construction of several claim terms, dispute various jury instructions, and argue that a reasonable jury could not have found infringement on the correct claim construction. They also state that the damages award was excessive or speculative.

The district court rejected ODMC's request for an immediate injunction, and authorized continuing operation by the defendants through the conclusion of all appellate and post-appellate proceedings at a royalty rate of 12.64425% of Lightning Source's revenues for operations covered by the patent. ODMC describes this remedy as a compulsory license and argues that it was improperly granted, citing the general rule that a patentee has the right to an injunction. This is the subject of ODMC's cross-appeal.

#### DISCUSSION

[1] Claim construction is a matter of law, and receives plenary review on appeal. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978 (Fed.Cir.1995), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996); see *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1456 (Fed.Cir.1998) (*en banc*). The

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reviewing court determines whether a reasonable jury, on correct instruction of law, could reasonably have reached the verdict reached by this jury; that is, was there substantial evidence in support of the verdict, when disputed questions of fact and factual inferences are resolved in favor of the party that received the verdict. *See, e.g., Richardson v. Suzuki Motor Co., Ltd.*, 868 F.2d 1226, 1235 (Fed.Cir.1989).

\*4 [2][3][4] A jury instruction based on incorrect law, such as an erroneous claim construction that may have affected the verdict, receives *de novo* review. An erroneous jury instruction may warrant a new trial, *see Ecolab Inc. v. Paraclipse, Inc.*, 285 F.3d 1362, 1373 (Fed.Cir.2002), or the court may consider whether, on the correct instruction, the jury could have reached only one verdict. *See, e.g., Cybor*, 138 F.3d at 1454. The court's award of a royalty-bearing license during appeal and refusal to issue an immediate injunction are reviewed on the standard of abuse of discretion.

## I

### Claim Construction

The district court held a *Markman* hearing and construed the disputed terms of the claims. Only claim 8 was presented for jury verdict, and the claim terms are reviewed in that context.

[5] These claim construction proceedings took place in 2002-03, at a time when conflicting Federal Circuit panel opinions were producing uncertainty as to the law of claim construction. *See Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed.Cir.2005) (*en banc*) (clarifying the law and resolving conflicts in claim construction). This court in *Phillips* emphasized that the proper judicial construction of a claim and its terms is from the viewpoint of a person of ordinary skill in the field of the invention; the court must determine how such a person would understand the claim in the context of the particular technology and the description in the specification, with due reference to the prosecution history. Thus the court in *Phillips*, resolving conflict, stressed the dominance of the specification in understanding the scope and defining the limits of the terms used in the claim. 415 F.3d at 1313.

#### 1. "Sales Information," Clauses [3] and [4] of Claim 8

Although this case was tried before *Phillips* was decided, the district court mostly applied the precedent whose correctness has been confirmed. For example, although the district court approached the construction of "sales information" in claim clauses [3] and [4] by

reciting general dictionary definitions, as follows:

The word "sales" is an adjective modifying the word "information." The dictionary definition of "information" is "1. knowledge derived from study, experience, or instruction; ... 5. a non accidental signal used as an input to a computer or communication system." [citing several dictionaries],

the court held, correctly, that "these multiple dictionary definitions of 'information' and 'sales' should be construed in a manner which is consistent with their use in the intrinsic record." The district court then defined "sales information" as "data stored in a computer which is involved in the promoting and selling of a book," and that the term is not limited to promotional information, but includes descriptive information as well, such as price. The jury instruction was as follows:

The term "sales information" in Claim 8 is broader than promotional information and may include descriptive information which would aid in making a sale to the customer, such as the price of the book, Library of Congress notice, fly sheets, synopsis, plot outline, author's biographical summary, price, SKU and/or ISBN number.

\*5 The defendants argue that the district court construed and instructed the jury on "sales information" too broadly. They argue that the patent specification and prosecution history require that "sales information" always includes information that is promotional in nature, and that the term is not met by the provision of only price and identifying information such as title or ISBN. ODMC responds that the claims are not limited to the embodiment illustrated in the specification, and that "sales information" is infringed even when there is no promotional information included with the identifying information. In finding infringement the jury necessarily accepted the ODMC view, for the orders to Lightning Source carry only identifying information, and Lightning Source provides no promotional information.

[6][7] In general, the scope and outer boundary of claims is set by the patentee's description of his invention. *Phillips*, 415 F.3d at 1313-14. The specification makes clear that sales information is that which would help the consumer to choose a book. We agree with the defendants that the prosecution history requires this claim construction, for the inclusion of promotional information was a material distinction from the prior art. Mr. Ross stressed that in his invention a customer can browse among books based on information concerning the substantive content of

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the book. The specification identifies "descriptive material such as a synopsis, plot outline, author's biographical summary, etc." as promotional information. Col. 6, lines 18-21. ODMC stressed this distinction from the prior art on reexamination:

It is submitted that in no way is a job file descriptor to be confused with means for allowing a customer to browse among a multiplicity of books stored on Patent Owner's system and to select the book of interest for on-demand printing and delivery to the customer.

The reexamination examiner agreed, stating as the ground of patentability that:

The prior art does not disclose or suggest the storing of sales information for customer review which provides descriptive information relating to stored books in a computer in combination with the customer selection of books or portions of books, ....

ODMC states that the term "sales information" is met by identifying information such as title or ISBN alone, for the specification states that the computer stores a "Book Attributes Description" and lists eleven attributes that "include the title of the book, its ISBN number and other information (as shown in FIG. 5) which help to describe the book and to provide the potential customer [with information] about the book." Col. 11, lines 3-9. ODMC argues that the ISBN is sufficient sales information, and that this claim term is met whether or not promotional material such as book reviews are also made available to customers. ODMC argues that the jury necessarily so found, in finding infringement.

The defendants argue that ODMC disavowed this interpretation in order to obtain the patent, and represented to the patent examiner that the inclusion of promotional material is what distinguishes this invention from the prior art. We agree with the defendants that "sales information" requires that promotional information is stored in the computer that is made available to the customer. The ISBN or the title and author are file identifiers, not promotional information. The jury instruction, if read to mean that identifying information alone can satisfy the "sales information" term, is incorrect.

\*6 We conclude that on the correct construction of "sales information," claim clauses [3] and [4] cannot be met by Lightning Source's activities, for it was not disputed that the books ordered from Lightning Source were ordered solely upon identifying data such as title or ISBN, without promotional information from Lightning Source. ODMC argues that Amazon.com provides sales information, producing

joint infringement as to the 10% of Lightning Source's production that is ordered by Amazon. We discuss this aspect in Part II, *infra*.

## 2. "Customer," Clauses [4] and [5] of Claim 8

[8] The district court construed "customer" to mean anyone "who buys goods or services," and that the "customer" does not have to be an individual consumer or a retail customer. The court rejected the defendants' argument that the Ross patent is limited to "direct retail customer sales," and instructed the jury as follows:

The word "customer" is "one who buys goods or services" and, is not limited to a retail customer.

The defendants argue that this claim interpretation is broader than the specification allows, and that the entire focus of the Ross patented invention is that the "customer" is the person who orders and immediately receives the printed-to-order book, the ultimate consumer. The defendants point out that their orders come only from resellers, not from individual purchasers, and that printing is at a remote factory, not at the customer's site. They point out that the Ross specification describes the customer as a consumer who, upon choosing a book, sets in motion the "high speed manufacture of a single copy of a selected book on the immediate premises while the customer waits for a very short time." Col. 3, lines 7-15. The defendants argue that the district court, in refusing to include this limitation of "customer" in its *Markman* definition and jury instruction, placed too much weight on a dictionary definition of "customer" that is out of context.

[9] ODMC argues that the patentee did not disavow the standard dictionary meaning of "customer," and that the Ross invention is not limited to any specific kind of customer. However, when the scope of the invention is clearly stated in the specification, and is described as the advantage and distinction of the invention, it is not necessary to disavow explicitly a different scope. See *Astrazeneca AB v. Mut. Pharm. Co.*, 384 F.3d 1333, 1339-40 (Fed.Cir.2004) ("Where the general summary or description of the invention describes a feature of the invention (here, micelles formed by the solubilizer) and criticizes other products (here, other solubilizers, including co-solvents) that lack that same feature, this operates as a clear disavowal of these other products"); *Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1268-69, 1271 (Fed.Cir.2001) "the written description 'can provide guidance as to the meaning of the claims, thereby dictating the manner in which the claims are to

be construed, even if the guidance is not provided in explicit definitional format.' " (quoting *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1344 (Fed.Cir.2001)).

\*7 The Ross specification repeatedly reinforces its usage of the term "customer" as the retail consumer. See col. 7, lines 24-25 ("All customer actions are conducted within customer console 103"); col. 15, lines 59-60 ("the customer seats himself or herself in front of computer screen 157" as depicted in Fig. 2); col. 2, lines 8-12 ("if the consumer wishes to purchase a book, he may either pay for the book through a store clerk ... or the consumer may enter his credit card into the system"). The specification distinguishes "general purpose machines ... not specifically designed to be consumer operated for the on demand, automatic manufacturing of a single book at the point of sale." Col. 10, lines 37-43.

[10] In *Phillips*, 415 F.3d at 1321, the *en banc* court explained that the role of the specification is to describe and enable the invention. In turn, the claims cannot be of broader scope than the invention that is set forth in the specification. Although we agree with the district court that the Ross invention does not concern itself with whether the "customer" reads the book or obtains it for resale, the focus of the Ross patent is immediate single-copy printing and binding initiated by the customer and conducted at the customer's site. The district court's definition of "customer" cannot eliminate these constraints in order to embrace the remote large-scale production of books for publishers and retailers.

### 3. "Providing Means for a Customer to Visually Review," Clause [4] of Claim 8

[11] The district court correctly viewed claim clause [4], "providing means for a customer to visually review said sales information," to be in means-plus-function form pursuant to 35 U.S.C. § 112(6), [FN2] and instructed that the customer-operated computer module is the corresponding structure shown in the specification. The jury was instructed as follows:

Claim 8, clause 4, recites: "providing means for a customer to visually review said sales information." The word "providing" in this clause has its usual and customary meaning, including to supply for use, contribute, or furnish.

The phrase "means for a customer to scan said sales information" in this clause [the words of claim 7] is interpreted to include a customer computer module, as described in Column 13, lines 54-67 and Column

14, lines 1-9, but does not include elements in the patent specification, which are referred to as being preferable, and thus a customer seat and ambient light are not included. Because this claim language concerns a means plus a function, the words "means for a customer to scan said sales information" include equivalents of a customer computer module which has the identical function permitting a customer to visually review the sales information which has been stored in a computer. Such equivalents include any computer monitor that gives a customer access to sales information that has been stored in a computer and any user input device for a customer to perform this function. These include accessing information by touching the computer screen or by use of structure that is equivalent thereof.

\*8 The defendants argue that the district court improperly invaded the province of the jury when it announced the equivalents that are "included," stating that it is the role of the trier of fact, here the jury, to determine equivalents under 35 U.S.C. § 112(6). See *Utah Med. Prods., Inc. v. Graphic Controls Corp.*, 350 F.3d 1376, 1383 (Fed.Cir.2003) (equivalents under § 112(6) is a question of fact); *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1268 (Fed.Cir.1999) (comparing overall structures corresponding to the claimed function).

ODMC states that it was not incorrect for the district court, in the context of claim construction, to instruct the jury as to possible equivalents of the computer monitor and how the customer accesses the sales information. Although equivalents do not lose their factual identity in a means-plus-function context, in the uncertain boundary between law and fact in claim construction, the giving of an instruction that is not incorrect factually is not reversible error. The infringement issue as to this clause, as the district court's instruction implemented, is not whether the computer contains a touch screen, but whether the defendants "provide" a computer means to customers. See *Acromed Corp. v. Sofamor Danek Group, Inc.*, 253 F.3d 1371, 1382 (Fed.Cir.2001) (limitations on the structure for means plus function claims must relate to the function at issue).

It is undisputed that these defendants do not provide a computer to the customer. ODMC states that the defendants provide themselves with computers and that Amazon.com provides sales information that a customer can access through any computer. However, this is not the Ross invention, which requires that the bookseller "provides" the customer with the computer for use in this unified browsing/ordering/printing

system. Although a witness for ODMC testified to his belief that the defendants encourage retail booksellers to provide computers for customer use, there was no evidence of such booksellers providing a computer system whereby the ultimate customer can initiate printing and binding of a selected book from data that had been entered into the computer.

Amazon states that while it provides computer-accessible information about books, including promotional information, it does not provide computers or computer kiosks. Consumers use their own computers to order books from Amazon, which in turn may place orders with Lightning Source. However, the consumer cannot order that the book be printed. As summarized by the district court:

Evidence at trial established that the books printed by Lightning Source are the result of various types of "demands": wholesalers use computer-ordering systems that do not involve any viewing of sales information available on any web site; two retailers order books in a similar manner; some publishers order books by EDI (Electronic Data Interchange) transactions where there is no use of any web site; other publishers order books by placing orders through the Lightning Source web site, but that ordering process requires no viewing of sales information; retail customers may order Lightning Source-printed books through Amazon's web site by reviewing sales information, but the books may have already been printed as a result of an Amazon order to Lightning Source.

\*9 Order of July 23, 2004, at 13. The evidence summarized by the district court was undisputed: Publishers, wholesalers, and retailers, order books from Lightning Source in various ways, but there is not direct ordering by retail customers.

#### 4. "Printing on Paper Pages," Clause [7] of Claim 8

[12] It was undisputed at trial that Lightning Source prints on rolls or webs of paper rather than on pre-cut sheets. The district court ruled that "printing the text of said selected one of said books on paper pages" of clause [7] does not mean that the book must be printed on previously separated pages; that is, the printing can be on long webs or continuous rolls and then cut into pages. This resulted in the following jury instruction:

This clause requires the printing of one or more books. The term "paper pages" does not require the text to be printed on sheets of paper, as opposed to being printed on continuous rolls or any other of a variety of forms of paper, although the book which is produced by the process must be comprised of pages as opposed to rolls.

The defendants argue that this interpretation and instruction are incorrect, and that the claim requirement that the book be printed "on paper pages" means that the paper is in the form of pages when printed, rather than being cut into pages after printing. The defendants stress that the Ross patent is for an immediate-production automatic printing process, and not one that requires commercial-scale equipment for paper-cutting after printing.

The specification states that the patented invention is the printing of individual copies of books at the customer site rather than in a "factory setting," col. 1, lines 13-19, and illustrates a "page printer 26," which prints a "stack of paper text pages," col. 8, lines 22-40, showing page-size paper. The specification describes the Ross invention only as printing on individual pages, as distinguished from a "factory setting" and the production of multiple copies. The Ross invention, and the claims, are directed to the on-site printing and binding of a single copy, for which printing on large webs and the requirement of cutting to page size would require equipment and procedures inimical to the substance of the Ross invention.

We conclude that the district court erred in construction of this clause. When this clause is correctly construed, no reasonable jury could find that it reads on a process of printing on large sheets or webs of paper that require the further processing step of cutting into pages after printing.

#### 5. The Preamble

[13] The district court held that the preamble phrase "high speed manufacture of a single copy of a book" does not limit the claim to immediate printing or require that only one copy be printed, and instructed the jury that:

The phrase "high speed manufacture" in the preamble does not limit the claim to require that all other steps, such as a customer's scanning sales information, selecting a book, and then printing and binding a book must take place within a short period of time. The preamble also does not limit the claim to the manufacture of a "single copy" of a book, as opposed to manufacturing several or multiple copies.... and does not require that the book be bound with a cover.

\*10 The defendants argue that this instruction is incorrect, and that the preamble explicitly limits the claim, in that it states the invention to which the claim is directed. They also point out that clauses [9], [10], and [11] require a cover.

[14] In considering whether a preamble limits a claim, the preamble is analyzed to ascertain whether it states a necessary and defining aspect of the invention, or is simply an introduction to the general field of the claim. In *Kropa v. Robie*, 38 C.C.P.A. 858, 187 F.2d 150, 152 (1951), the court aptly described the inquiry as whether the preamble is "necessary to give life, meaning and vitality to the claims or counts." See, e.g., *Poly-America, L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1309-10 (Fed.Cir.2004) (the specification described the "blown-film" as a fundamental characteristic of the invention, and its use in the preamble limited the claims); *In re Cruciferous Sprout Litigation*, 301 F.3d 1343, 1347-48 (Fed.Cir.2002) (the preamble phrase "rich in glucosinolates" was limiting because the patentee relied on the preamble to distinguish the prior art in prosecution); *General Elec. Co. v. Nintendo Co., Ltd.*, 179 F.3d 1350, 1361-62 (Fed.Cir.1999) (where the specification made clear that the invention was a mode of display of binary data on a raster scanned display device rather than all display devices, the preamble language "displaying a pattern on a raster scanned display device by mapping bits" was a claim limitation).

The preamble serves to focus the reader on the invention that is being claimed. We conclude that the preamble in this case necessarily limits the claims, in that it states the framework of the invention, whose purpose is rapid single-copy printing of a customer's selected book as stated in clauses [5], [6], [7], and [8]. The high speed manufacture of a single copy is fundamental to the Ross invention, for the specification highlights that the customer may have a printed and bound copy within "three to five minutes." Col. 2, line 33. While ODMC points out that Lightning Source's web site touts "In one week, we craft 70,000+ books, one at a time," such mass production is not the invention described and claimed by Ross.

The district court's instruction that the preamble in this case does not limit the claim was incorrect, for the entirety of the claim implements the preamble's high speed manufacture of a single copy, upon customer review of the stored sales information, promptly printing and binding the single copy in response to the customer's selection. The preamble embraces the totality of these limitations, and limits the claim to the subject matter of the preamble.

## II

### Conclusion

[15] The parties disputed most of the claim terms.

Although we agree with the district court that each term standing alone can be construed as having varying degrees of breadth, each term must be construed to implement the invention described in the specification. See *Phillips*, 415 F.3d at 1316 (Fed.Cir.2005) ("The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction."); *Autogiro Co. of Am. v. United States*, 181 Ct.Cl. 55, 384 F.2d 391, 397-98 (1967) ("use of the specification as a concordance for the claim ... is a basic concept of patent law"). Care must be taken lest word-by-word definition, removed from the context of the invention, leads to an overall result that departs significantly from the patented invention.

\*11 [16] The defendants argue that no reasonable jury could have found that defendants infringe claim 8 on application of the correct claim construction. Lightning Source stresses that its system of producing books, usually in batches of 300, is the factory setting that Ross distinguished as a basis of patentability. The defendants concede that on occasion a single copy may be ordered and printed by Lightning Source, but that generally multiple copies are ordered and produced. Defendants argue that neither Lightning Source nor Ingram nor Amazon provides customers with access to computers, and that no defendant provides or offers to customers an apparatus for point-of-purchase manufacture of a book. None of the defendants provides a system of computer access, nor sites for immediate printing and binding. The district court observed that wholesalers and publishers and stores, when ordering from Lightning Source, do not view promotional information; and that when retail customers order from Amazon's website the books may already have been printed.

ODMC responds that the customers provide themselves with computers, whether individual consumers or resellers. ODMC states that even if this court deems promotional material to be required by "sales information," and even if Lightning Source and Ingram do not provide promotional material, Amazon.com does provide such information to customers by computer. ODMC argues that when a customer orders from Amazon upon reviewing Amazon's promotional information, and Amazon in turn orders that the book be printed by Lightning Source, the defendants together infringe the patent. ODMC states that the jury could reasonably have found that Lightning Source and Amazon were liable for joint infringement, for the district court instructed as to joint infringement, as follows:

It is not necessary for the acts that constitute infringement to be performed by one person or entity. When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method. Where the infringement is the result of the participation and combined action(s) of one or more persons or entities, they are joint infringers and are jointly liable for the infringement.

We discern no flaw in this instruction as a statement of law. However, the fundamental precept of the Ross invention is that the customer uses an on-site computer to view promotional information, and then initiates rapid single copy printing. A customer's placing an order with Amazon, who in turn obtains the book, even if it is printed in single copy, is not the Ross invention. Each of these components of the claimed invention is in the prior art; their combination is the patentable invention, and it is the practice of the combination that is essential to infringement. Taken separately, Amazon's method of taking orders for books is prior art; Amazon does not print books, and the immediate on-site printing of the Ross invention is absent.

\*12 The printing of a single copy of a book, using computer technology and high-speed printing, was prior art to the Ross patent. The defendants correctly point out that the Ross invention is the immediate printing and binding of a copy of a book, where the customer initiates this activity upon review of promotional information stored in a computer that is provided by the seller. Mr. Ross stressed during reexamination that the distinction of his invention over the Interpress reference is the inclusion of promotional information for customer access, and prompt book production. The Interpress reference, as described by the reexamination examiner, shows computer-stored book text and information (but not promotional information), a means for selectively retrieving a stored book, and high-speed printing plus binding with a cover. However, Interpress does not show the direct customer role contemplated in the Ross patent; that role is central to the claim construction.

We conclude that no reasonable jury could find infringement, on the correct claim construction. The judgment of infringement is reversed. Because we reverse the judgment of infringement, the damages award is vacated.

### III

The cross-appeal relates to the district court's denial of an immediate injunction upon entry of the district court's judgment, and the court's setting of a royalty for continuing operations during appeal. That remedy is within the district court's discretion. However, in view of our holding of non-infringement, the cross-appeal is moot, and is dismissed.

Each party shall bear its costs.

*REVERSED; CROSS APPEAL DISMISSED.*

*FN1. On Demand Machine Corp. v. Ingram Indus., Inc.*, No. 4:01cv1668MLM (E.D.Mo. Oct. 28, 2004) (*judgment* ); July 23, 2004 (*order denying enhancement of damages* ); July 5, 2003 (*claim construction order* ).

*FN2. Section 112(6).* An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

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- [2005 WL 1397791](#) (Appellate Brief) Joint Reply Brief of Defendants-Appellants Ingram Industries Inc., Lightning Source Inc. and Amazon.Com, Inc. (May 24, 2005)Original Image of this Document (PDF)
- [2005 WL 1024649](#) (Appellate Brief) Brief of Appellee/Cross Appellant On Demand Machine Corporation (Apr. 12, 2005)Original Image of this Document with Appendix (PDF)
- [2005 WL 771081](#) (Appellate Brief) Joint Brief of Defendants-Appellants Ingram Industries Inc., Lightning Source Inc. and Amazon.Com, Inc. (Mar. 1, 2005)Original Image of this Document (PDF)
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- [05-1074](#) (Docket) (Nov. 10, 2004)

- [05-1075](#) (Docket) (Nov. 10, 2004)

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